relicensing studies. However, unconfirmed sightings of this species have been received historically from biologists working near Robinson Borrow Pond (adjacent to the FERC Project boundary) and Cherokee Canal (2 miles west of Thermalito Afterbay), and within Thermalito Afterbay. No suitable habitat exists at Lake Oroville. Several small, isolated patches of backwater habitats along the Feather River provide suitable habitat. The rice fields and canals along the western border of Thermalito Afterbay have suitable habitat for giant garter snake. These canals are primarily on private property outside of the FERC Project boundary. Rice fields and agricultural ditches provide habitat for most of the current populations of the giant garter snake (USFWS 1997), and these areas are expected to have populations of giant garter snake. Furthermore, these canals offer dispersal channels for giant garter snake to eventually move into the OWA waters that have potentially suitable habitat. However, State Route 99 serves as at least a partial barrier to this dispersal habitat.

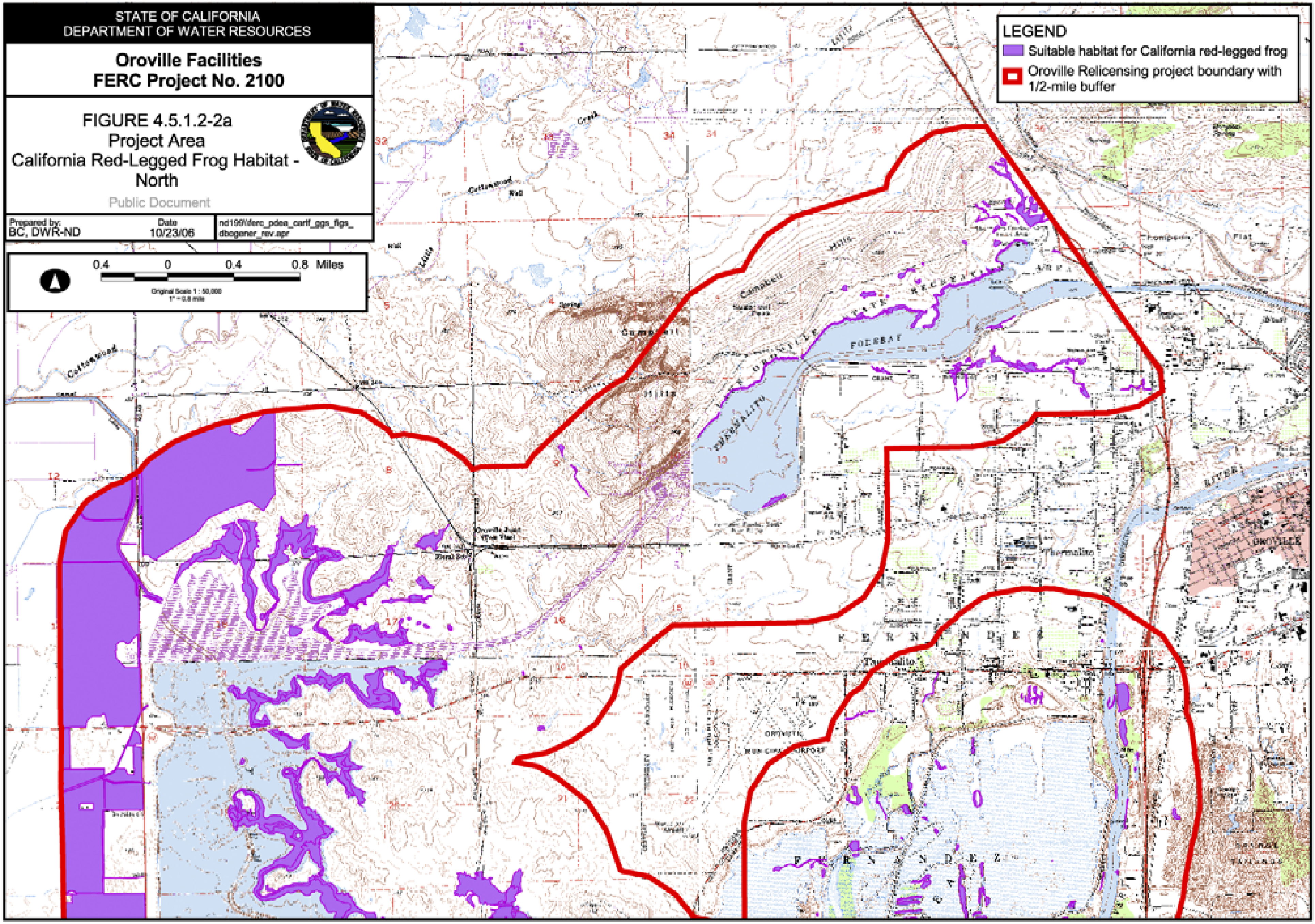
California Red-Legged Frog. USFWS listed the California red-legged frog as a Threatened species under FESA in June 1996. This species is considered a Species of Special Concern by the State. The California red-legged frog has been extirpated from approximately 70 percent of its former range, with only 2 known populations remaining east of the Coast Range.

The California red-legged frog can occur from sea level up to approximately 5,000 feet elevation; most known populations exist below 3,500 feet. This species uses a variety of aquatic habitats for reproduction—streams, deep pools, backwaters, ponds, marshes, sag ponds, dune ponds, and lagoons (USFWS 2000). Breeding adults are generally associated with deep (greater than 2 feet), slow-moving water bordered by dense, low riparian or emergent vegetation (USFWS 2000). Upland areas near breeding locations can also be used extensively during the summer (USFWS 2000). Several reasons for the population decline have been identified: habitat loss (alteration, degradation, and fragmentation); urbanization; agricultural practices; water management activities; mining; livestock practices; recreational effects; timber harvest practices; exploitation (as food); disease; introduced species (e.g., bullfrog, mosquitofish, and largemouth bass); drought; and contaminants (USFWS 2000).

California red-legged frogs are not currently known to exist within the FERC Project boundary. However, the largest remaining population within the Sierra Nevada is within 1 mile of the FERC Project boundary in the North Fork Feather River drainage (USFWS 2000). Suitable red-legged frog habitat was identified within portions of Thermalito Forebay, Thermalito Afterbay, and the OWA (Figures 4.5.1.2-2a through 4.5.1.2-2c). Neither Lake Oroville nor the portion of the reservoir's tributaries within the project area contain suitable habitat.

Vernal Pool Invertebrates. The project area is known to be within the range of three federally listed eubranchiopod species: the vernal pool tadpole shrimp, the Conservancy fairy shrimp, and the vernal pool fairy shrimp.

The vernal pool tadpole shrimp is federally listed as an Endangered species. This tadpole shrimp species is found in vernal pools throughout the Sacramento Valley and


STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
Oroville Facilities
FERC Project No. 2100
FIGURE 4.5.1.2-2a
Project Area
California Red-Legged Frog Habitat - North
Public Document
Prepared by:
BC, DWR-ND
Date
10/23/06
nd199\ferc_pdea_carlf_ggs_figs_dbogener_rev.apr
0.4 0 0.4 0.8 Miles
LEGEND
Suitable habitat for California red-legged frog
Oroville Relicensing project boundary with 1/2-mile buffer
OROVILLE
Thermalito
FORBAY
FERNANDEZ